

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-325-17
Relating to Certification of New Motor Vehicles

GFI CONTROL SYSTEMS, INC.

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1999 model-year GFI Control Systems, Inc. exhaust emission control systems are certified as described below for medium-duty vehicles:

Emission Standard Category: Ultra-Low-Emission Vehicle (ULEV)

Fuel Type: Dual-Fuel Compressed Natural Gas (CNG) or Gasoline (Indolene)

Engine Family: XG9XA05.4JBN Displacement: 5.4 Liters (330 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Dual Warm Up Three Way Catalytic Converters
Dual Three Way Catalytic Converters
Three Way Catalytic Converter
Dual Heated Oxygen Sensors (two)
Exhaust Gas Recirculation
Sequential Multiport Fuel Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The non-methane organic gases (NMOG), carbon monoxide (CO), oxides of nitrogen (NOx), and formaldehyde (HCHO) ULEV certification exhaust emission standards for this engine family in grams per mile are: (The standards in parentheses are for gasoline.)

<u>Test Weight</u> <u>(lbs.)</u>	<u>Miles</u>	<u>NMOG</u>	<u>CO</u>	<u>NOx</u>	<u>HCHO</u>	<u>CO (20°F)</u>
5751-8500	50,000	0.117 (0.195)	5.0 (5.0)	0.6 (0.6)	0.011 (0.011)	n/a (12.5)
	120,000	0.167 (0.280)	7.3 (7.3)	0.9 (0.9)	0.016 (0.016)	n/a

The CNG certification exhaust emission values set forth for NMOG reflect application of a reactivity adjustment factor (RAF) for CNG-fueled medium-duty ULEVs, and the addition of the product of the methane exhaust emission value and a RAF for methane emission of CNG-fueled medium-duty ULEVs.

Reactivity Adjustment Factor for NMOG Mass Emission: 0.43

Reactivity Adjustment Factor for Methane Mass Emission: 0.0047

The certification exhaust emission values for this engine family in grams per mile are: (The values in parentheses are for gasoline.)

Test Weight (lbs.)	Miles	NMOG	CO	NOx	HCHO	CO (20°F)
5751-8500	50,000	0.033 (0.079)	1.9 (1.1)	0.2 (0.1)	0.001 (0.0001)	n/a (5.2)
	120,000	0.039 (0.136)	2.2 (3.5)	0.2 (0.2)	0.001 (0.0002)	n/a

BE IT FURTHER RESOLVED: That the manufacturer shall not be subject to the phase-in requirement as specified in Title 13, California Code of Regulations, Section 1960.1(h)(2) Endnote (10)(d) applicable to small-volume manufacturers of medium-duty vehicles.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

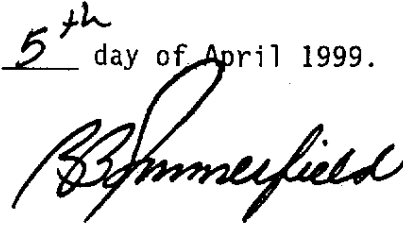
BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 5th day of April 1999.

A handwritten signature in black ink, appearing to read "R. B. Summerfield". The signature is fluid and cursive, with a large initial "R" and a long, sweeping underline.

R. B. Summerfield, Chief
Mobile Source Operations Division

Air Resources Board SUPPLEMENTAL DATA Sheet
Passenger Cars, Light Duty Trucks and Medium Duty Vehicles
Model Year 1999

EO # A-325-17

Manufacturer: GFI CONTROL SYSTEMS INC. Exh Eng Fam: XG9XA05.4JBN Evap Fam: XFMXE0155BAG
 All Engine Codes in Engine Family: CA X 49s 50s AB965 CRVR: same as OEM NO
 Exh Std: CA Tier-1 TLEV LEV ULEV X SULEV US EPA Tier-1
 Veh. Class(es): PC LDT1 LDT2 MDV1 MDV2 MDV3 X MDV4 MDV5
 Single Cert Standard for Multi-Class Eng Family: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
 Fuel Type(s): Dedicated Flex Fuel Dual Fuel X ~~FF~~-Fuel Gasoline X Diesel
 CNG X LNG LPG M85 Other (specify)
 Exh Emiss Test Fuel(s): Indo X CBG CNG X LPG M85 Other (specify)
 Diesel: 13 CCR 2282 40 CFR 86.113-90 40 CFR 86.113-90
 Evaporative Emissions Test Procedure: California X Federal 40 Ford: gasoline
 Service Accum: Std AMA Mod AMA Mfr ADP Other (specify) assigned dts: CNG
 NMOG Test Procedure: N/A Std X Equiv R/L Test Proc: SHED X Pt Source
 Engine Configuration: V8 Displacement: 5.4 Liters 330 Cubic Inches
 Valves Per Cylinder: 2 Rated HP 235 @ 4250 RPM
 Engine: Front X Mid Rear Drive: FWD 2WD X 4WD-FT 4WD-PT
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI, EGR, 2HO2S(2)W, 2TWC, 2TWC, 2TWC
 (use abbreviations per SAE J1930 Jun93)

Engine Code (also list CA/49st/50st)	Vehicle Models (if coded see attachment)	Trans. (M5, A4 etc.)	ETW or Test Wt.	DFA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
9vzahve/26f1/be Calibration: 6P2F1C01.R99	F-150 Pickup 4X4, F250 Pickup 4x2, 4x4 Regular & Supercab.	A4	6875 lbm	16.2hp	XC3F-12A650- AME (gasoline) V24-100 (CNG)	F75E9D475-CA	XL34-5E214-GA3 XL34-5E214-HA3 XL34-5G218-GA3 XL34-5G218-HA3 F858-5E212-ADGF